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The Ten No Nos of Teaching with a Projector or Interactive Whiteboard by Lisa Nielsen

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I spend a lot of time visiting innovative classrooms in New York City. As I do, there is something that I've noticed in many classes I've visited - there are still some educators that don't seem to know the no nos for teaching with a projector or interactive whiteboard (IWB). Perhaps it's easier to notice when you're sitting as an audience member or an observer which is not often the case for teachers. If you're an innovative educator teaching with a projector or IWB, you too might be engaging in a no no or two.

Here are ten no nos to avoid as you teach with technology.

No no: Don't have your back to your participants

Description: This is one of my biggest pet peeves and something I see all the time. The teacher sets her laptop up so that to use it she is facing the screen or whiteboard. The teacher then instructs the class with her back to them. Awkward! Educators should not be talking to a board. They should speak to a class.

Solution: By simply flipping the direction of the laptop the teacher can see the entire class. Additionally, the laptop becomes her teleprompter as she addresses her students.

Advantage: The teacher can maintain eye contact with her participants providing for a more authentic discussion. She can also see their reactions and level of interest.

No no: Do not make a shadow on the whiteboard or screen with your hand or body.

Description: In many classrooms the teacher is standing in front of the board pointing to things or speaking about things that are being projected. The problem is he's in the path of the objects projected and students can't see what it is he's speaking about.

Solution: Be aware of the projection light. If you feel you must be at the board, perhaps you can use a pointing stick. You can also verbally tell students what part of the board you are discussing i.e. if you look in the top left quadrant. Finally, you don't need to go up to the board. You can engage the class directly from your laptop.

Advantage: The students can see what it is you are sharing.

No no: Don't project a small and/or crooked image

Description: I often go to classrooms and am perplexed as I see a tiny and/or crooked image displayed on the screen. It's as though the instructor has turned on the projector and doesn't realize it may need adjustment.

Solution: Make sure the image fills the entire space onto which you are projecting and adjust your projector manually or using the keystone feature to make sure it is not crooked. You can make the image larger by placing the projector the proper distance from the screen and/or using the adjustments on the projector. You can make the image straight by manually moving the projector left or right or by using the keystone feature on the projector.

Advantage: A small or distorted image is a distraction that most teachers want to avoid. By ensuring your image fills the screen and is straight you're participants will more easily be able to see and focus on your presentation.

No no: Don't leave your audience in the dark.

Description: Teaching and learning should not occur in the dark. Don't turn off the lights during instruction. This does not encourage interactivity and engagement, but instead it makes some people rather sleepy. Additionally, it's difficult to have eye contact and see student reactions in the dark.

Solution: Leave the lights on. In most rooms you can still generally see projected items with the light on. If your room has multiple light switches, just shut off the front lights. If you have windows, close the blinds in the part of the room where you are projecting. If it's really difficult to see with the lights on, get a few lamps for your classroom. Not only will this accomplish the goal, it will add a nice atmosphere to the room.

Advantage: Your students will be more alert, engaged, and likely to participate in the lesson. Teachers can see their students and their students can see one another.

No no: Don't point with your finger.

Description: This is a big mistake I see all the time. Teachers think they need to point directly on the screen so they end up doing a dance between their laptop and the screen.

Solution: Every computer comes equipped with a free electronic pointer. It's called your cursor. You don't need to run to the board to point at the screen. Students know what a cursor is and can follow it if you instruct them to do so.

Advantage: If you point with your cursor rather than your finger you can maintain eye contact with your audience allowing you to better gauge their interest and understanding of the lesson. You can also avoid doing the unnecessary dance between your laptop and the screen or board onto which you are projecting.

No no: Don't waste instructional time fumbling with projector set up

Description: Classroom time should not be wasted with equipment set up. Instructional time is valuable and it's important that technology using teachers are not robbing students of instruction with equipment set up. We never want students ready to learn with a teacher who isn't ready to teach them.

Solution: It's important to become very familiar with equipment set up. Teachers often use tape on the floor so they know exactly where the projector, computer desk, and or screen should go. Many savvy teachers have a student responsible for setting up the projector at the start of the lesson while the teacher is beginning instruction. This is an elegant solution that involves your tech-savvy students.

Advantage: Student learning is increased. Students with an interest in technology become more confident in their abilities and recognized for their talent.

No no: Don't assume your audience can see what you can see

Description: The person presenting is usually close to the laptop or interactive whiteboard and can see everything clearly, but those in the back of the room may not be able to see things as well. It's important that you remember to zoom in and out so that your audience can best view what you are projecting.

Solution: While specifics may vary from computer to computer, they all have zooming features. On some computers you can use "ctrl" or "command" and "+" or "-" on other computers you can use the scroll wheel on your mouse. If these options don't work visit the help menu.

Advantage: Participants will be able to see and hear what you are sharing. You may want to assign a student responsible for reminding you if you need to zoom.

No no: Don't be a sage on the stage

Description: While I often hear educators proudly discussing how engaged students are with interactive whiteboards, and I often hear sales folks boasting of the interactivity of whiteboards, I almost never see them used interactively with students. The same is true for a teacher with a projector. It's time for teachers to get off the pulpit and let their students shine.

Solution: There are many ways to encourage interactivity of students with an IWB or projector. This should be worked into the teaching and sharing. Recently I saw a teacher projecting and presenting to students video clips of various classmates sharing. It was time for the teacher to step down and let the students share their own

videos. They could have played their video and discussed it rather than the teacher doing that. Another class I visited had students working in groups. After wards they shared their learning from their desks while some irrelevant information was projected on the screen. This teacher also had access to five laptops that were in the corner of the room. The teacher could have given each group of students a laptop and let them put something together to project in a fun an interesting format rather than have each student go around and share in a bored tone what they had worked on. They could have placed their work on a shared space, a thumbdrive, or brought their laptop up to project. When students know their work will be shared and displayed, they are more excited and accountable. In another class a teacher was showing students how music and sound could affect the mood of a dialogue. He played the audio of various student's pre-recorded dialogue and then put different sounds and music as a background and discussed how it affected the mood of the piece. Again. Teacher, get off the stage. Let each student group present their work and select the sound they want to use. They love using these tools. Not watching you use them.

Advantage: Students find an interactive classroom more engaging. When students know that their work is going to be shared and displayed, they are excited and more invested in the work. Share the limelight and let your students shine. Your students will love it.

No no: Don't use your projector as a blackboard or replacement

Description: If a blackboard/whiteboard would do, don't waste your bulb. They are costly. I've often gone into rooms where there's just an aim projected on the screen. Not necessary. Teachers need to know the tool for the cause. If you just have a sentence to project, turn off the projector and put it on the whiteboard. I've also seen a projector left on with assignment directions that were also handed out to the class or, each student has a laptop where the assignment is displayed. Again, turn off the projector and save the bulb.

Solution: When developing lessons determine if you really need to leave the projector on the whole time. If you are just projecting a sentence, use the blackboard. If your students already have the work in hand on their laptop or paper, you don't need the projector.

Advantage: You'll save hundreds of dollars on projector bulbs.

No no: Don't waste money on an interactive whiteboard without some smart reasons

Description: More often than not I go into a classroom and see a teacher not using their interactive whiteboard or I see them struggling to use it, but not quite knowing how and relying on another adult or student to assist. Many educators believe that you need a costly interactive whiteboard to teach engaging lessons with a projector, but you don't. None is required.

Solution: Before wasting thousands upon thousands of dollars on costly interactive whiteboards take a moment and think. Will my teachers really utilize these boards to enrich instruction in a way that justifies the cost or might my students be better served by having access to technology in their own hands. A school can start with just a projector and save thousands of dollars. You can always purchase IWBs at a later time. In fact while IWB companies fund research that shows they are effective, more and more people are finding that student achievement is no higher in classrooms with IWBs than those with projectors only. To date in five years of searching and upon visiting many classrooms, I still have not seen instruction enhanced with an IWB. It may be happening somewhere, but I haven't seen it. Smart principals should ask those teachers who want interactive whiteboards to write a proposal to justify the expense and that proposal should clearly explain and state compelling reasons explaining how IWBs will result in more effective instruction than if they used a projector alone. If they can make a case, consider the purchase. If you find, as I have, that they can accomplish most of what they are talking about with a laptop (ideally a tablet) and a projector, you may want to reconsider.

Advantage: You'll save thousands of dollars that you can allocate to technology that instead can go directly into your student's hands.

Lisa Nielsen is an educational administrator and permanently certified teacher with more than a decade's worth of experience working in educational innovation at the city, state, and national level. She currently serves as Technology Innovation Manager for the NYC Department of Education. Ms. Nielsen is a Google Certified Teacher, International Edublogger, International EduTwitter, and creator of [The Innovative Educator](#) blog, [website](#), [learning network](#), and [wiki](#).

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